Health sciences library building projects, 1998 survey

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Twenty-eight health sciences library building projects are briefly described, including twelve new buildings and sixteen additions, remodelings, and renovations. The libraries range in size from 2,144 square feet to 190,000 gross square feet. Twelve libraries are described in detail. These include three hospital libraries, one information center sponsored by ten institutions, and eight academic health sciences libraries.

INTRODUCTION

Despite articles on whether there will be a need for libraries in the future, new library buildings are being built and old library buildings are being renovated. Fox observes that "If the public is willing to spend more than half a billion dollars on new structures, it undoubtedly considers libraries essential to its well-being and future" [1]. In its 1999 Facilities Showcase, *American Libraries* notes that "Across the nation, libraries are doubling or quadrupling in size while adding computer stations, barrier-free bathrooms, elevators, and fireplaces—or just opening new quarters" [2]. Chepesiuk reviews several offsite storage projects that have recently been completed or that are currently being constructed [3]. Anderson describes the considerations of planning a joint use library, combining a community and a college library [4]. Knowles observes that the library of the twenty-first century will be a blended library that must incorporate connections, outreach, distance learning, and education as well as books, journals, media, and databases [5].

This article is the seventh in a series of articles on health sciences library buildings that was initiated in 1991 by Logan Ludwig [6–11]. A call for building projects was issued through health sciences libraries' e-mail discussion lists in December 1998. The forty respondents were asked to supply details of their building projects and a total of twenty-seven persons sent more details. Several of the nonrespondents were either just beginning their projects or were only contemplating projects, so they chose not to send more information. The turnaround time requested was also assumed to be a factor in the lack of follow-up by some of the initial respondents.

Of the twenty-seven respondents, one institution, the University of Colorado Health Sciences Center in Denver, has two building projects, a new storage facility and a renovation of the existing library, and both are scheduled to begin in the summer of 1999. Thus, there are twenty-eight projects listed in Table 1, which includes institution, type of building project, contact person, start date, end date, previous library square feet, new library square feet, cost, and number of seats. Readers are encouraged to check with the contact persons for complete details of their building projects. Many of the libraries also maintain Web sites that highlight the progress of the library's building project. The Web site of the Louis Stokes Health Sciences Library of Howard University* is an excellent example of a Web site that provides background, floor plans, and progress reports.

Another source for information about health sciences library buildings is the *Annual Statistics of Medical School Libraries in the United States & Canada*, which periodically publishes descriptive statistics on buildings size, with the most recent compilation in 1998 [12]. The average size of the 136 academic health sciences libraries in 1997 is 43,574 square feet with a range from 5,949 to 150,000 square feet. These libraries report having from 37 to 2,200 seats, averaging 415. Computing

* The Web site for the Louis Stokes Health Sciences Library may be viewed at http://www.founders.howard.edu/~hsl/.

Table 1
Recent health sciences library building projects—1998 survey

Institution	Library	Type	Contact
California Pacific Medical Center/University of the Pacific School of Dentistry, San Francisco, CA	Health Sciences Library	Renovation of 88-year old library	Douglas Varner
Children's Hospital Medical Center, Cincinnati, OH	Edward L. Pratt Library	New, current library 67 years old	Barbarie Hill
Cleveland Clinic Foundation, Cleveland, OH	Cleveland Clinic Alumni Library	New, former library 35 years old	Gretchen Hallerberg
East Carolina State University, Greenville, NC	William E. Laupus Health Sciences Library	Renovation of 17-year old library	Dorothy Spencer
Eastern Virginia Medical School, Norfolk, VA	Edward E. Brickell Medical Sciences Library	New, current library built in 1978	Judith Robinson
Exempla Saint Joseph Hospital, Denver, CO	Saint Joseph Hospital Foundation Libraries	New, former library 20 years old	Margaret Bandy
Finch University of Health Sciences/The Chicago Medical School, Chicago, IL	Boxer University Library	Renovation of 16-year old library	Sharyn Fradin
Harvard Medical School/Boston Medical Library, Boston, MA	Francis A. Countway Library of Medicine	Renovation of 34-year old library	Judy Messerle
Houston Academy of Medicine-Texas Medical Center, Houston, TX	Library	Previously renovated in mid-1970s	Naomi Broering
Howard University, Washington, DC	Louis Stokes Health Sciences Library	New, current library 71 years old	Sekum Boni-Awotwi
JFK Medical Center, Edison, NJ	Medical Library	Previous location since 1989	Lena Feld
Mercer University School of Medicine, Macon, GA	Medical Library and Peyton Anderson Learning Resource Center	Renovation of 16-year old library	Jocelyn Rankin
New England College of Optometry, Boston, MA	Library	Renovation of 104-year old building	Brenda Collins
Philadelphia College of Osteopathic Medicine, Philadelphia, PA	O. J. Snyder Memorial Library	Renovation of 25-year old library	Etheldra Templeton
Scott and White Memorial Hospital, Temple, TX	Richard D. Haines Medical Library	Previous location since 1985	Barbara Henry
Southern California College of Optometry, Fullerton, Ca	M. B. Ketchum Memorial Library	New, former library 25 years old	Donnajean Erwin
Texas Heart Institute, Houston, TX	Library	Previous location since 1990	Annanaomi Sams
Texas Tech University Health Sciences Center, Lubbock, TX	Preston Smith Library of the Health Sciences	New, former library 25 years old	Richard Wood
Touro University, Vallejo, CA	Medical Library	Renovation of 1974 Naval facility	Rochelle Perrine Schmalz
University of Colorado Health Sciences Center, Denver, CO	Denison Memorial Library	New storage facility	Rick Forsman or Pat Nelson
University of Colorado Health Sciences Center, Denver, CO	Denison Memorial Library	Previously expanded in 1977	Rick Forsman or Pat Nelson
University of Maryland, Baltimore, MD	Health Sciences and Human Services Library	New, former library 30 years old	M.J. Tooey
University of New Mexico, Albuquerque, NM	Health Sciences Center Library	Renovation of 25-year old library	Holly Shipp Buchanon
University of Pittsburgh, Pittsburgh, PA	Falk Library of the Health Sciences	Renovation of 40-year old library	Patricia Mickelson
University of South Dakota/Sioux Valley Hospital, Sioux Falls, SD	Karl & Mary Jo Wegner Health Science Information Center	New	David Hulkonen
University of Texas Health Science Center San Antonio Regional Academic Health Center, Harlingen, TX	Library	New	Virginia Bowden
University of Virginia, Charlottesville, VA	Claude Moore Health Sciences Library	Renovation of 25-year old library	Linda Watson
University of Wisconsin, Madison, WI	Health Sciences Learning Center, HealthStar	New, will integrate 3 libraries	Karen Dahlen

Table 1
Extended

Start date	End date	Previous square feet	New square feet	Cost	Seats
Dec 1997	Aug 1998		20,425 net; 25,425 gross	$330,000	100
Nov 1998	Aug 2000	2,500	5,730 net; 6,300 gross	$1 million w/o furnishing	40–50
Sep 1996	Mar 1999	6,000	approximately 35,000 net; 42,000 gross	$36 million for total building	320
Dec 1998	Mar 1999	42,400	42,400	$136,000	335
Dec 1998	May 2000	19,500	40,000 net; 56,500 gross	$11 million including technology	400
Jun 1995	Mar 1997	1,760	4,801	$928,000	48
Jul 1997	Sep 1998	17,000	estimated 52,000 net; 54,700 gross	$7 million	450
Mar 1998	estimated Apr 2000		139,315 net; 162,000 gross	$26 million	700
Aug 1997	Jan 2000	86,323	86,323	$1.9 million	412
Nov 1998	2001	27,000 net	60,000 net; 85,000 gross	$18 million	615
Mar 1994	Apr 1998	1,200	2,144	$80,380	23
Jul 1996	Mar 1998	24,850 gross	estimated 24,250 net; 24,850 gross	$312,500	350
Jan 1998	Dec 1998	1,395	1,707 net; 1,903 gross	$3.5 million	71
Jun 1998	Aug 1998	10,674	13,444 net; 16,176 gross	$787,560	126
Apr 1997	Jan 1998	3,600	6,792 net; 7,500 gross	$350,000	64
May 1997	May 1998	6,090	11,616	$3.7 million	93
Nov 1998	Jun 2001	less than 3,000 gross	10,000 net	part of $75 million project	70
1996	Jan 1998	19,611	50,000 net; 63,068 gross	$11 million	300
Jan 1999	Jun 1999	n/a	will use 10,000 s.f. of 22,360	$1 million	250
Oct 1999	Aug 2000	n/a	18,690 net; 19,258 gross	$4 million	n/a
Jun 1999	Oct 1999	63,640	48,760 net of 63,640 gross	$2 million	354
Mar 1996	Feb 1998	45,000 net	118,000 net; 190,000 gross	$32 million	900
Aug 1998	Jun 1999	34,859 net	34,859 net; 47,159 gross	$230,000	400
Feb 1998	Dec 1998	41,552 net	47,552 net	$550,000	92 added
Oct 1996	Jan 1998	n/a	21,627	$2,651,493	100
Feb 2000	Jan 2002	n/a	12,000 net estimated	part of $25 million project	100
Mar 1999	Sep 2000	62,264 gross	45,133 net; 69,435 gross	$6 million	400
Jul 2001	Jul 2003	60,385	62,500	Total project approximately $50 million	450

Figure 1
Exempla Saint Joseph Hospital, William V. Gervasini Memorial Library

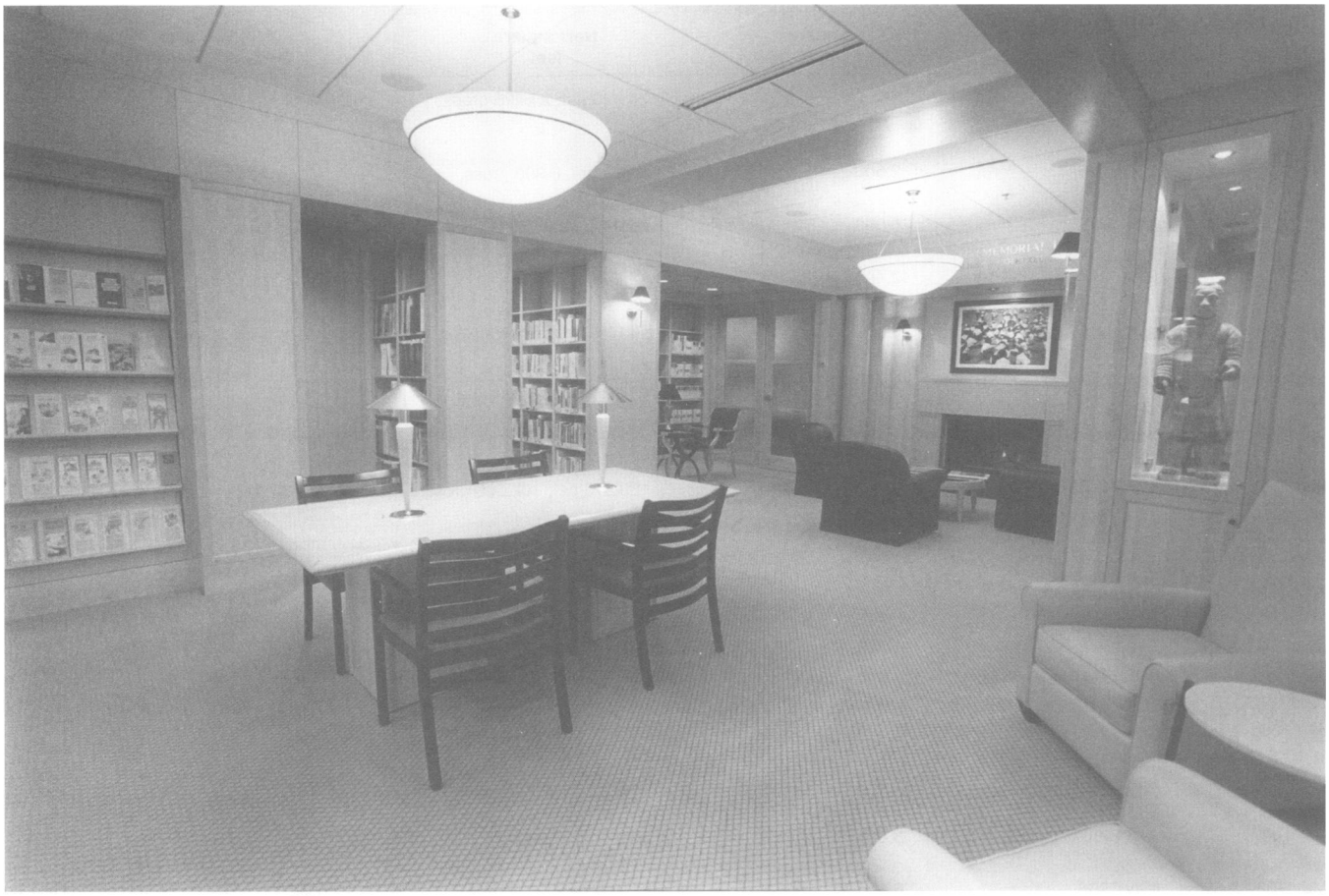


Photo courtesy of Exempla Saint Joseph Hospital and used with permission.

classrooms, with an average size of 805 square feet, are located in 135 libraries. The number of computers managed by these libraries ranges from none to 238, with an average number of 54.

The *Standards for Hospital Libraries* should also be consulted [13]. The section on facility notes that the physical size and arrangement of the library can significantly affect the provision of quality service. Although specific recommendations are not given, the reader is advised to consult a qualified medical librarian and a library building consultant whenever a library renovation or addition is planned.

One of the best things for library building planners to do to prepare themselves for the experience is to visit a variety of libraries to see what works and to exchange ideas about buildings. The following twelve minireports describe recently completed library building projects.

EXEMPLA SAINT JOSEPH HOSPITAL, LIBRARY, DENVER, COLORADO

Submitted by Margaret Bandy

Exempla Saint Joseph Hospital was established in Denver in 1873 by the Sisters of Charity from Leavenworth, Kansas. The hospital's first professional librarian staffed the Nursing School library from 1955 to 1965. In 1965, the Medical Education Department established a medical library in the hospital, and the nursing collection and librarian moved to new quarters. That library was on the second floor of the hospital until 1976, when it was moved to the eleventh floor, North Tower. In this location, the library occupied a circular space with a 600-square-foot area for the collection and for patron seating, with staff offices in separate rooms outside the library. In 1985, a library

for patients and families was opened in a room adjacent to the medical library.

During the next ten years, the library became increasingly automated, participating in the integrated system of the University of Colorado Health Sciences Center. By 1995, the journal collection was housed in five separate rooms and the book collection in three separate rooms on the eleventh floor. In 1995, the hospital planned an addition that would include medical education offices and a conference center, and the decision was made to relocate both medical and patient libraries to the first floor of the new addition.

Funding for the Medical Education Center was provided by the Saint Joseph Hospital Foundation. The librarian was involved in all phases of planning the new facility, and drew upon colleagues and Medical Library Association (MLA) standards for information to reinforce the requirements of the new libraries. Additional support came from the residency training program directors, representing 100 residents in four programs, as well as from the Library Committee.

The new medical library allows for the collection, patron seating, and staff offices to be together. There are three offices for the librarian, assistant librarian, and library assistant, and a spacious workroom that houses the staff photocopy and fax equipment, counters and cabinetry, and two desks for volunteers. Square footage increased from 1,500 to 3,690. Seating has increased from sixteen to thirty-one including workstations. Shelving capacity has increased from 800 to 1,300 linear feet. Public workstations have increased from two to seven, with a total of twenty network connections for future expansion. There are five network connections for staff. Patrons have access to the Ovid Web Gateway for NLM databases, Cumulative Index to Nursing and Allied Health (CINAHL), Evidence-Based Medicine, and four full-text collections; Health Reference Center Academic; and Micromedex and Stat!REF via the hospital intranet. Through the Colorado Consortium of Database Networking, the library subscribes to sixteen FirstSearch databases, Britannica Online, and GaleNet, all at flat rates. Microsoft Office applications are also available on the library computers.

A critical aspect in designing the new library was a security system. In the old library, residents were issued keys for twenty-four-hour access, and there was no way to prevent losses. Working with the hospital engineers, the Checkpoint system, and the Comtel Technology company, a system composed of three components was designed. Authorized after-hours users have a card that records the time of entry on the same system used for other secured areas in the hospital. All books and journals are tagged for alarm at the Checkpoint gates. The final component is a security camera that records motion when individuals enter or leave the library. The camera records the flash of the Checkpoint gate so unauthorized removal of materials is captured. The videotape is reviewed each morning for any incidents. Follow-up by the training program directors has been effective in discouraging further problems, and the system has been very successful.

The jewel of the new libraries is the William V. Gervasini Memorial Library for Patients, Families, and the Community. Although a small patient library was part of the old facility, the new library was blessed by the interest of Judi Kent Gervasini, a member of the hospital foundation. Her experience ten years earlier during the final illness of her husband sparked her interest in creating "a resource and a refuge" for patients and families. The hospital foundation provided the initial $100,000 for the facility, and Mrs. Gervasini added $100,000 of inkind contributions for architectural and design services, interior work, and publicity. The patient library thus increased in size from 260 to 1,111 square feet; shelving increased from 97 to 169 linear feet; and seating increased from 6 to 18.

The library (Figure 1) includes a gas fireplace, leather-overstuffed chairs, and wood paneling. Art works, soft music, and incandescent lighting add to the serene ambiance. A small conference room is available for patrons to view videos or for staff to meet with patients. Currently, one computer is available with CD-ROM programs and Web access, with three additional network connections for future expansion. The staff has designed several subject pathfinders as starting points for good Web sites. The pathfinders are available on the library Web site and are printed out for patrons to take. The Gervasini Foundation also has raised money to keep the collection updated, and the hospital foundation has continued that effort.

Response to the new libraries has been uniformly positive, and the facility has become a showplace that is often used for interviewing visiting dignitaries or for fundraising efforts. The staff enjoys both the beauty and the utility of the new space after so many years in a cramped, inaccessible location.

FINCH UNIVERSITY OF HEALTH SCIENCES/ CHICAGO MEDICAL SCHOOL, LEARNING RESOURCE CENTER, CHICAGO, ILLINOIS

Submitted by Sharyn C. Fradin

The expansion and renovation of the Learning Resource Center (LRC) at Finch University of Health Sciences/Chicago Medical School (FUHS/CMS) resulted from a need to enlarge the study carrel seating capacity of the facility and expand stack space for resource materials. The actual addition has far exceeded the initial reasons to expand by providing physical consolidation of related services and functions, providing new and state of the art computer and network options, and classroom and meeting spaces.

Figure 2
Finch University of Health Sciences/Chicago Medical School, Learning Resource Center

Photo courtesy of Finch University of Health Sciences/Chicago Medical School and used with permission.

The existing learning resource center space opened in 1981, as part of the relocation of the facility from downtown Chicago to a North Chicago campus setting. The original space was reconfigured over the years, including a modest expansion of the space, which supplanted space originally occupied by other functions. The original LRC was never renovated or updated as a part of these reconfigurations. As a result, the space was adjusted in the most minimal ways to accommodate changing needs. The best example of this sort of necessary updating was in the area of technology. When the LRC opened in 1981, computer use was centralized, bulky, and accessible and prevalent in education and business. This shift caused the university to convert former study/conference rooms into computer rooms for training and research. With the advent of laptop computers and the Internet, specific rooms dedicated to computer use were no longer mandatory, but increased power and cabling became essential. While the university was able to make some provision for personal computer use, the need far outstripped the availability. Against this backdrop, the university embarked on the most ambitious expansion since its move to North Chicago.

During the programming phase of the LRC expansion, careful attention was paid not only to the obvious shortcomings of the existing space, but also to hopes and aspirations of what the new and improved space could be. The need for additional stack space and study carrels was easy to quantify and justify. Similarly justifiable was the need to address, to the degree the budget could support, the need for technological improvements, which would not only meet the needs of the moment, but also incorporate some degree of flexibility to accommodate unknown, but anticipated, changes in the future. The pragmatic needs for the new space were fairly well documented and defined, while the architectural direction was only loosely defined.

Because the addition was to be appended to a much larger building (of which the LRC was a small part), the decision was made to maintain the existing vocabulary on the exterior. For the interior, only the furni-

ture style was to remain consistent with the existing style. This decision provided an opportunity to break from the rather bland and dated interior of the existing LRC. In so doing, thought was also given to those modifications that could be made to the existing space with minimal down time and with the most visual impact. The renovation of the existing space would help to unite it with the new space, providing a consistent image for the LRC.

In the addition, the new furniture matched the existing style, but with updated fabric. A variety of light fixture types were used including direct, parabolic, and indirect (used primarily over study carrels to minimize glare; especially on computer screens). A lighter, brighter color scheme broke with the standard that was used throughout the remainder of the university. A hierarchy was developed for the carpet patterns relating patterns to the type of space in which they were located, and color was used to reinforce directions. Cove lighting, soffits, and changes in the height of the ceiling plane were used to develop zones within the larger space. A number of finishes matched the existing style: wood finishes (furniture, doors, etc.), stainless steel (hardware, switch and outlet plates), and the color of the stack shelves.

In order to reinforce a consistent image, existing furniture was reupholstered; the existing LRC interior was painted to match the addition; new carpet was installed throughout; new and replacement light fixtures were installed; and a new ceiling was installed to replace the existing one. These improvements to the existing space helped to bridge successfully between old and new, although the new space was clearly superior as a result of features incorporated into the design. Most dramatic was the sculpted feel of the space imparted by the lighting and height changes of the ceiling and dramatic floor opening with a stainless steel stair down to the lower level with coordinated chandeliers suspended above.

Programming changes midway through the project introduced additional classroom space to the lower level of the addition, which already featured computer and multimedia labs and a computer classroom. The three new general-purpose classrooms were to be flexible, through the use of operable partitions, so that they could be joined into one single large space.

The final project, as built, is a two-story 35,000-square-foot addition to the original 17,000 square foot Learning Resource Center, resulting in a contiguous 52,000 square foot facility. Study carrels in the new addition provide both power and a local area network (LAN) outlet for laptop computer use and access to the Internet. The lower-level computer lab and classroom provide computers for training and study, in addition to Internet access (Figure 2). The lower level also serves as host to leisure reading areas, two computer and technology offices, server room, hub room, conference space, medical illustrations, photography department, duplications, storage and mechanical space, and public toilets. On the ground floor, new offices and conference/study space have been provided along with extensive stack space (allowing for approximately 1,300 linear feet of book and bound periodical storage), 136 study carrels with power and data connections, storage and electrical closets, and public toilets.

JFK MEDICAL CENTER, MEDICAL LIBRARY, EDISON, NEW JERSEY

Submitted by Lena E Feld

The JFK Medical Center is a 535-bed facility with a staff of 750 attending physicians and dentists and a total staff of 3,800 with off-campus locations for subacute care. There are residency programs in family practice, rehabilitation medicine, neurology, dentistry, and colon-rectal medicine with thirty-seven participants in addition to two to four fourth-year medical students from the University of Medicine and Dentistry of New Jersey who are assigned to the medical center for one semester per year. The Medical Library is staffed by a medical librarian and several volunteers. Library services are also provided to students in pharmacy, nursing, physical therapy, respiratory therapy, occupational therapy, and pastoral care studies. The library's collection includes about 1,500 monographs, 280 journal subscriptions, extensive videos and audiocassettes, and six networked end-user personal computers (PCs) with access to the Internet, as well as the EBSCO MEDLINE search engine with links to some full-text articles. A Web page with access to core medical texts is planned and a Consumer Health Library is being established.

Shortly after this community medical center opened in 1967, a volunteer set up a small library in the Physicians' Lounge. Over the years as the hospital grew, this task was taken over by a medical librarian, and the Medical Library was given its own area on the second floor near the physicians' lounge and the Medical Records Department. While the location was very convenient for the doctors, there was no room to expand as the collection grew, so in 1989 the Medical Library was relocated to the first floor, away from the familiar and convenient location, but with about 1,200 square feet of space. By 1998, space again became a limiting factor, as the Medical Library only had room for a table for six and two end user PCs with just one CD-ROM product, MEDLINE on SilverPlatter, in addition to a TV/VCR for viewing videos, and a microfilm reader-printer.

In 1998, the auxiliary of the medical center decided that the Medical Library would be the sole beneficiary of funds raised at their annual ball, mirroring the desire of the administration to implement its commitment to continually raise the academic excellence of

the medical center. This desire triggered the decision to designate part of the new tower construction as the new Medical Library with the result that the library's entrance lobby would be in the "old" part of the building, while the stacks seamlessly occupy space in the "new" area. Apart from the services of the architect and library consultant, the construction was supervised by the medical center's own construction team, which coordinated this project while also completing patient rooms and public areas. The choice of wall coverings, furnishings, and shelving was made by the medical center's inhouse decorator. In order to include the medical and dental staff in this selection process, she prepared three boards containing wall covering, carpeting, and upholstery samples, which she placed in the Physicians' Lounge, with a tally for people to indicate their preferences. The resulting choices were a reflection of the majority's selections.

The transfer of the library contents was complicated because of the domino effect of other departments. The space the library was vacating was designated to be used by the Training and Education Department, which had to move to make room for another department. Thus, the librarian had to move into the new space before the shelving had been installed. The move was facilitated by housekeeping personnel who physically packed up the entire collection while the librarian tagged each box with its contents. The librarian and volunteer staff worked around those boxes for a few weeks while the shelves were installed and the same crew unpacked the books and journals and placed them on the shelves. Then, the librarian needed to shelf-read the collection and reshelve misfiled items to correct hasty unpacking. Based on the librarian's previous experiences with moving a library, she tagged each shelf in the old library and the new one with corresponding tags, and the move proceeded efficiently and smoothly, with the collection being moved from old shelf to designated new shelf. However, when outside events interfere with the best plans, people adapt! The users who were inconvenienced during the interim period gave the librarian their full understanding and support. Patient care searches were not disrupted, as one computer was relocated and hooked up for the librarian's use before the others were transferred.

The floor plan (Figure 3) illustrates how the space was divided, working around fixed supporting columns determined by the overall design of the building. The space conforms to Americans with Disabilities Act (ADA) requirements and is equipped with ceiling sprinklers. A separate area contains a drop-leaf photocopier for books and another has a TV/VCR for viewing continuing medical education (CME) videocassettes.

MERCER UNIVERSITY SCHOOL OF MEDICINE, MEDICAL LIBRARY AND PEYTON ANDERSON LEARNING RESOURCES CENTER, MACON, GEORGIA

Submitted by Jocelyn A. Rankin, Ph.D.

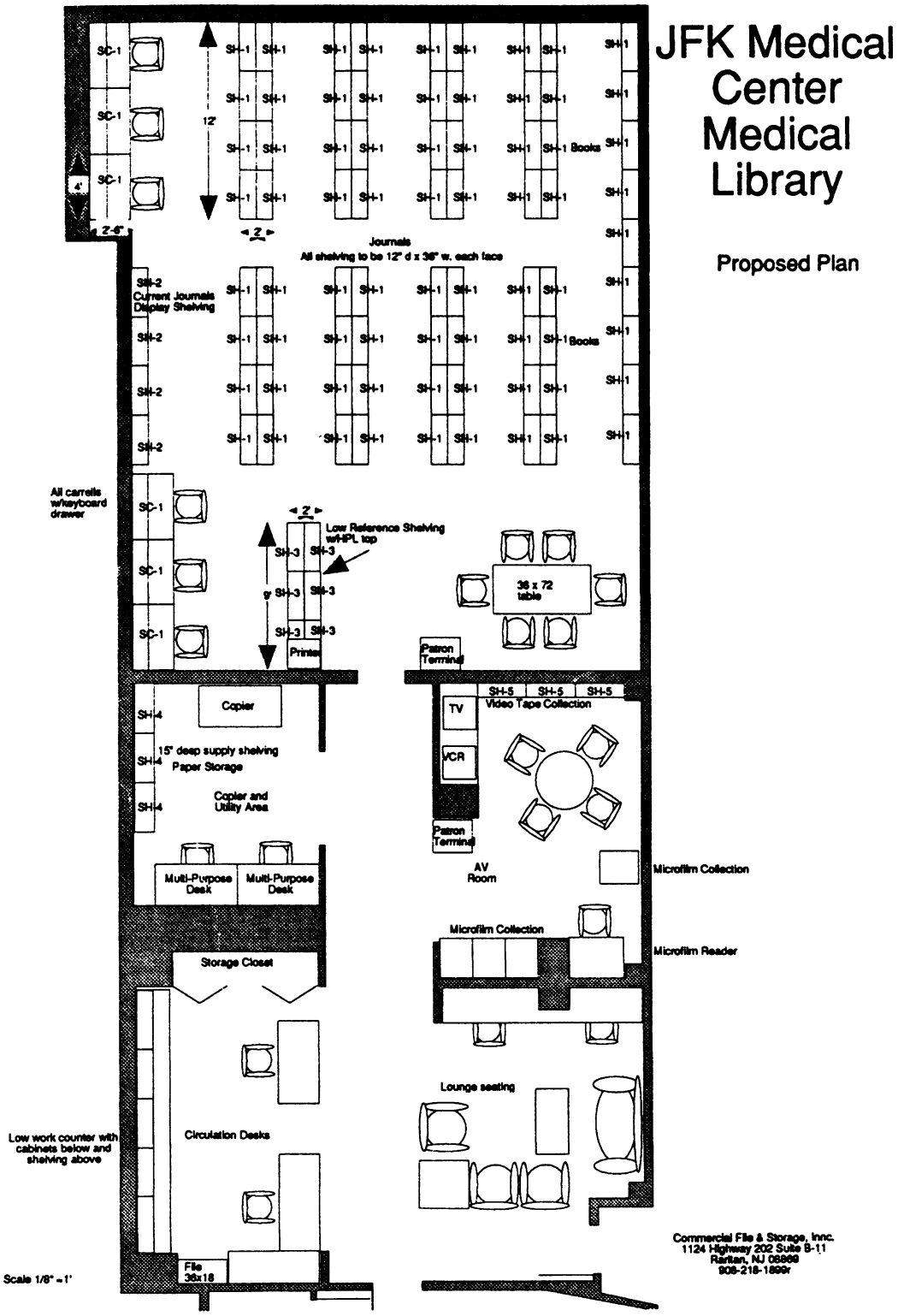
The mission of Mercer University School of Medicine in Macon, Georgia, is to train primary care physicians for practice in rural and underserved areas of Georgia. The school accepted its first class of medical students in 1983 into a fully integrated, problem-based learning curriculum. Construction of the main medical school building, which includes the library, was completed prior to the admission of the first class. The entire facility was designed to support the problem-based learning curriculum and the students' independent learning activities.

The library opened in its current location in 1982 with 18,640 square feet [14]. The Peyton Anderson Learning Resources Center (LRC), which came under library administration in 1989, provided another 6,210 square feet and included space for an extensive anatomical model gallery, radiograph collection, computer workstations, exam rooms for the simulated patient program, and laboratory and classroom space. Renovation and refurbishment during 1996 to 1998 have provided a fresh look and increased electronic access throughout the library and LRC. In addition, two new spaces were created, a history of medicine room and a computer classroom.

The history of medicine room was dedicated in May 1997 as the Will C. Sealy History of Medicine and Mercer University School of Medicine Archives Library (Figure 4). Dr. Sealy is an emeritus faculty member, formerly chair of the Department of Surgery, whose distinguished career has earned him accolades as the father of arrythmia surgery. The Sealy Library houses historical and archival material about the Mercer School of Medicine. The emerging history collection emphasizes items related to early Georgian and Southern medicine. Located at the center of the medical library, the new Sealy Library is housed in a preexisting round room of approximately 700 square feet. Custom designed oak cabinets around the perimeter provide 350 linear feet of shelving. In addition to soft seating, there are two workstations. Electronic versions of archival material and oral histories are available and are organized and maintained using standard imaging and retrieval software. The Sealy Library renovation has been supported by the Will C. Sealy Surgical Society.

A computer lab has been constructed to serve the dual functions of computer training classroom and national board testing facility. The 500-square-foot room has been planned to meet the National Board of Medical Examiners' specifications for testing space, security, and privacy. Located in a quiet cor-

Figure 3
JFK Medical Center, Library—diagram



Commercial File & Storage, Inc., Raritan, NJ.

Figure 4
Will C. Sealy History of Medicine and Mercer University School of Medicine Archives Library

Photo courtesy of Mercer University and used with permission.

ner of the library, the room's walls are constructed with sound-batt insulation. The classroom is equipped with sixteen ADA-compliant workstations and an instructor station. When used as a testing facility, sixty-inch workspaces are provided for each examinee, reducing the room's capacity to ten. The workstations are perpendicular to the instructor's desk and are separated by privacy panels. Because of this unusual layout for conventional computer training, three large, ceiling-mounted monitors supplement the central viewing screen for computer classroom students. Testing security is supported by a video-audio monitoring security system, which operates through two wide-angle cameras located at opposite corners of the room. An adjacent conference room doubles as the testing administrator's office, at which time the entire computer classroom can be viewed through a four-by-three foot observation window. The testing server itself is secured in an adjacent computer center room.

Additional medical library and LRC refurbishment projects included new paint and new carpet throughout; new lighting system for the LRC; complete rewiring to bring voice, data, and video connectivity to all staff members as well as to library carrels and most seating areas; and distance education capability in the LRC classrooms and library conference room. New seating was provided throughout both facilities, with the exception of some soft seating that was reupholstered. The library staff workroom, an open space, was completely redesigned with a paneling system to improve functionality and electronic access, and to provide additional work areas. Finally, a new Innovative Interfaces library management system was installed to

enable library system compatibility with the university library system.

NEW ENGLAND COLLEGE OF OPTOMETRY, LIBRARY, BOSTON, MASSACHUSETTS

Submitted by Brenda Collins

The newly restored and renovated library space serves as a tangible metaphor for what the New England College of Optometry, through its library, hopes to provide for faculty, staff, and students: information resources for today; an opportunity to develop information skills for tomorrow; and a collection strong in vision science, housed in an historically important residence.

The college is the oldest continuing school of optometry in the world, and the first (in 1901) to introduce the word optometry into its title. Today, the library serves over 400 optometry students and residents as well as practicing optometrists and an international program, which serves students from China to South Africa.

The library occupies an Italian Renaissance style building in Boston's Back Bay, designed by architects Peabody and Stearns for the Sears family. Emily Sears, wife of Henry Cabot Lodge, spent her first years in the home. First occupied in 1894, coincidentally the year in which Dr. August Klein founded the school that became today's New England College of Optometry, the building is also the first "fire proof" building of record in Boston. Students of interior design can detect a mixture of styles in the restored areas, which serve primarily as quiet areas. Two quiet upstairs studies feature marble fireplaces and gilded embossed wall coverings. The first floor now recaptures the elegance of the Brahmin Boston's gilded age with its thirteen-foot high ceilings, elegant rotunda, and decorative stained glass skylight dome. Appropriately, the Sears family library now houses the library's Historical Collections Study.

The residence passed from the Sears family to textile tycoon William Wellington, then to the family of famous Boston physician S. Burton Wolbach. After that time various owners used it as a meditation center, an apartment building, and a school for young ladies before its purchase in 1971 by the college.

The majority of library services—the circulation area, Web site and graphics production area, reading room, two group studies, reference area, and collections room—are located on the ground floor, which once housed the family's kitchen, laundry, and stables. The reading room area featuring the recent journal collection, once the family's carriage house, has window treatments designed to recreate the great doors (Figure 5). A garden area and a view of the Charles River can be seen from soft seating in the reading room. The majority of collections are housed in compact shelving, which has proven to be a good solution for space utilization.

The library is also home to the Marco Center for Instructional Technology, a student use and instructional facility underwritten by The S. R. Marco Family Foundation. Upstairs and down, the library is wired for laptop and Internet use. Laptops may be checked out for use by students. Adjoining the library is the Internet Café, equipped with networked workstations.

The restored and renovated building provides modern resources and facilities enriched by a setting that offers peace and elegance—a quiet oasis for learning, writing, study, research, and reflection.

PHILADELPHIA COLLEGE OF OSTEOPATHIC MEDICINE, O. J. SNYDER MEMORIAL LIBRARY, PHILADELPHIA, PENNSYLVANIA

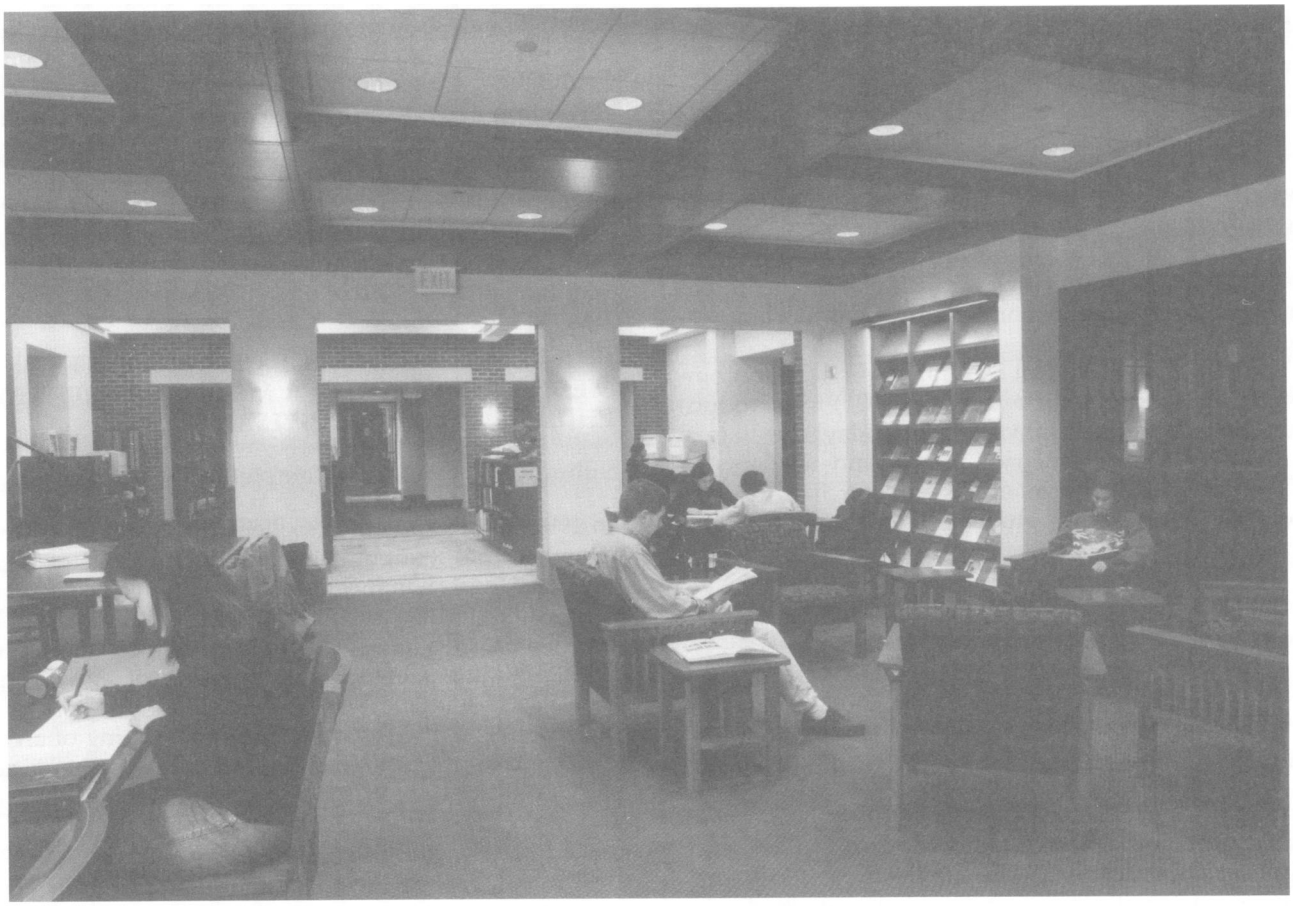
Submitted by Etheldra Templeton

In 1994, the Philadelphia College of Osteopathic Medicine (PCOM) inaugurated an ambitious Master Facilities Plan. The plan included (1) addition of new space for a state-of-the-art Osteopathic Manipulative Medicine Lab, faculty and departmental offices, and a Student Activities Center; (2) renovation of educational space including the library, labs, amphitheaters, and classrooms; and (3) creation and landscaping of an attractive Campus Courtyard to link the educational, administrative, and parking facilities. The final piece of the plan, the Student Activities Center, will be completed in 1999, the college's centennial year.

The O. J. Snyder Memorial Library, opened in 1974, was in dire need of renovation. The faculty Learning Resources Committee played the leading role in the planning process, and actively solicited input from users, particularly students, concerning their needs and desires. The project was scheduled for the summer of 1998. The library was closed to users on June 2 with the intention of reopening at the beginning of the academic year in mid-August. Miraculously, that time frame was met. Over the summer, users had access only to a core collection of reserve and reference materials and current journals. Services, especially interlibrary loan, were heavily used during this period.

The project involved a complete overhaul of the infrastructure, including the lighting, heating, ventilation, air conditioning, and security system. Space was fully wired for network access to support current needs and to allow for expansion. Wooden mezzanine railings were replaced with stunning stainless steel and beveled glass railings. New space included a beautiful, wood-paneled Journal Reading Room (formerly the board room), conference room, staff office, rest rooms, and basement storage area for older journal volumes (Figure 6). Furnishings were top grade and included inlaid cherry carrels, study tables, and stack

Figure 5
New England College of Optometry, Library



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ends. The carrels all were wired to provide laptop access to the PCOM network.

A Digital Library Center on the second floor of the library houses twenty Pentium-chip computers and a networked laser printer. The library Web page provides access to SAL (the online catalog), databases, e-journal collections, electronic forms and instructional guides, Internet Subject Guides, and the Internet. The center is enclosed with glass so that library staff may conduct training sessions without disrupting users of the adjacent study space.

A gala Grand Opening was held in October. Students, faculty, staff, and administration have expressed great satisfaction with both the renovated facility and the digital library. The goal of creating a comfortable and attractive environment to support access to print and electronic collections and information skills training has been achieved.

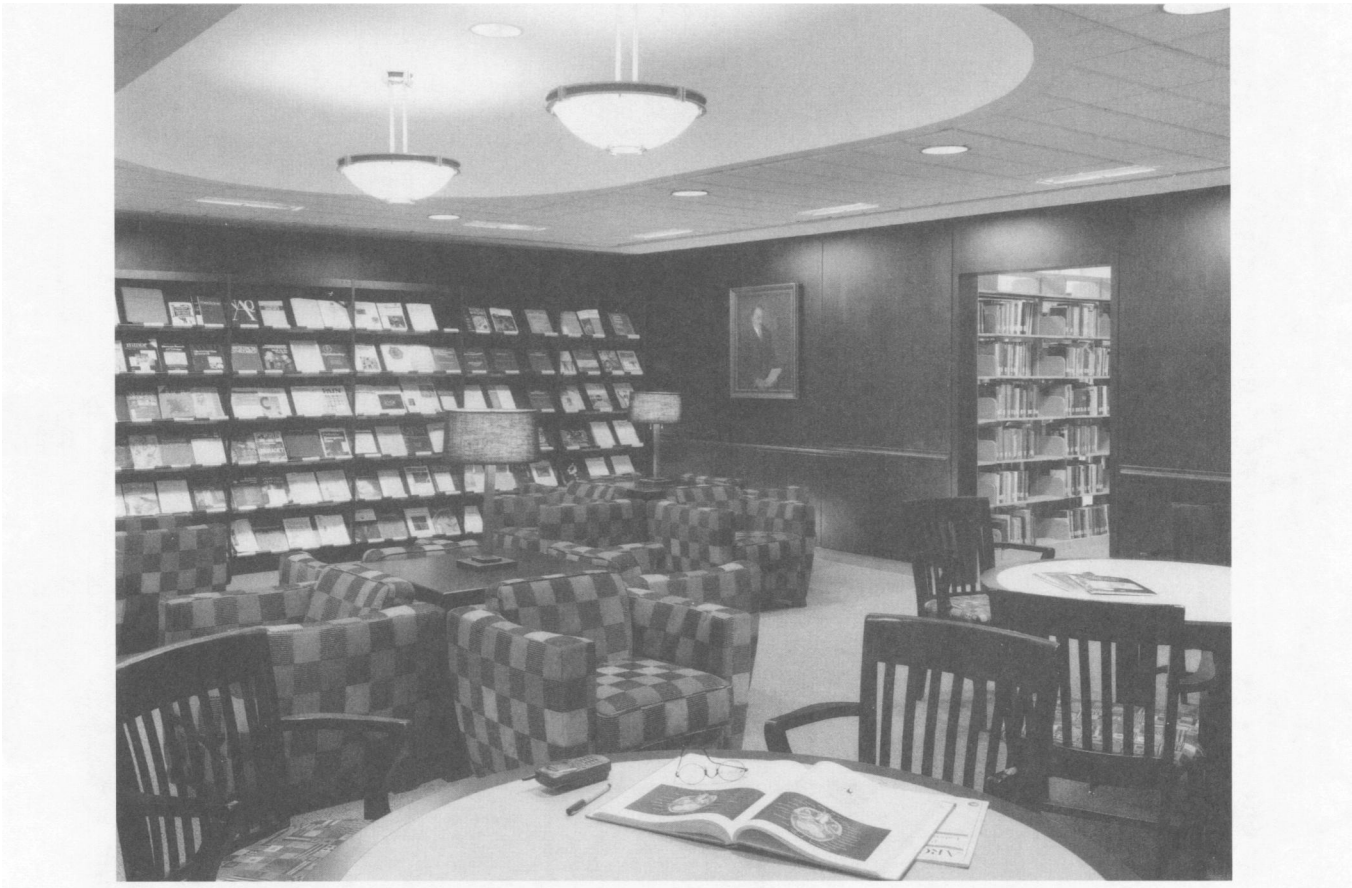
SCOTT AND WHITE MEMORIAL HOSPITAL, RICHARD D. HAINES MEDICAL LIBRARY, TEMPLE, TEXAS

Submitted by Barbara J. Henry

The Medical Library at Scott and White Memorial Hospital, a 439-bed tertiary care facility located in Temple, Texas, was established around 1919. The library was first housed in the original clinic building in downtown Temple and moved to other locations twice. In 1963, the hospital and clinic relocated to a hill three miles south of downtown and the library was located in the basement of the hospital. In 1984, the library was named after Dr. Richard D. Haines, a former president, trustee, and governor of Scott and White Memorial Hospital, Scott, Sherwood and Brindley Foundation. In 1985, the library was slightly enlarged to approximately 3,600 square feet.

As a result of the domino effect that occurred in

Figure 6
Philadelphia College of Osteopathic Medicine, O. J. Snyder Memorial Library, Journal Reading Room



Tom Crane Photography, Inc., Bryn Mawr, PA.

relocating and expanding other hospital and clinic departments, the library was moved a fifth time in February 1998. Today, the library has a collection of just under 42,000 book and journal volumes in the new space of approximately 7,500 gross square feet (6,792 net square feet) plus 3,600 square feet in a remote storage facility. The cost of the renovations was approximately $250,000.

New furnishings include modular furniture for all offices, chairs, a reference table, and lighting fixtures as well as more shelving for the 1,000 current journal titles. The additional shelving allows the library to maintain ten years of journals in the main facility before removing any to remote storage. More study carrels, with network connections, have been purchased, increasing carrel seating from ten to thirty-two. The seating capacity of the new library is now sixty-four. This seating includes a fourteen-station computer lab and several tables. The total cost of furnishings was $100,000.

The new library is located in the former hospital laundry, just down the hall from the old location. The library staff conducted a survey of its users shortly after being informed of the possibility of moving and compiled a wish list of features for the new facility. Working with the organization's own architects, the librarians planned the new library, incorporating as many of the desired features as possible. Construction began in April 1997 and was completed in January 1998. The move occurred the following month.

The library is open fifty-three hours a week. The library staff consists of four professional librarians, 2.6 technical support personnel, and four part-time library assistants. They provide a full range of services, including mediated and end-user literature searching, photocopying, interlibrary loan, educational programs, and access to the Internet.

The library is accessible through the hospital's network. Clients may request literature searches, photocopy articles, read the latest issue of the library

Figure 7
Southern California College of Optometry, M. B. Ketchum Library

Photo courtesy of Southern California College of Optometry and used with permission.

newsletter, renew their books, or peruse the latest acquisitions from the library's intranet page. Database access through the library's file server is also available.

SOUTHERN CALIFORNIA COLLEGE OF OPTOMETRY, M. B. KETCHUM LIBRARY, FULLERTON, CALIFORNIA

Submitted by D. J. Erwin

The Southern California College of Optometry (SCCO) was established in 1904, and opened its first library in June 1937. The library was named in honor of the school's founder, Marshall B. Ketchum. In 1973, SCCO moved to its present location in Fullerton, California, and the library was housed in 6,090 square feet of the Student Center Building for the next twenty-five years.

In 1998, a new academic building was constructed and the library was fortunate to be able to realize its dream for the future. Providing technology needed by today's student to combine the knowledge gained in clinical and classroom experiences, the library now provided an environment conducive to study and research. Constructed at a total cost of $11,500,000, the entire building project consisted of a 340-space security parking garage and the 30,959-square-foot two-story Richard L. Hopping Academic Center (Figure 7). The first floor of the building has one 300-seat lecture hall that converts to three 100-seat classrooms. A fitness center, shipping and receiving center, and security offices are also located on the first floor. The library shares the second floor with four seminar rooms and an adjoining computer lab. The library itself cost about $3,500,000 to construct, with another $200,000

spent on furniture, bookstacks, computers, and equipment.

Placed along scenic, eucalyptus-lined Fullerton Creek, the building was designed by LPA Inc. of Irvine, California, to "bring the outside in." The 11,616-square-foot library appears to be sitting in the trees with the west wall of floor-to-ceiling glass. The staff area, located behind the circulation desk, is separated from the rest of the library by a glass wall. The area can accommodate three staff members and oversees the entire library. This arrangement allows the staff to monitor circulation and reference activity. The size of the audiovisual lab has been increased and allows students to view slides and videos individually. The use of the library by study groups has been encouraged by increasing study rooms from one to five. The four seminar rooms located just outside the library add a total of another thirty-two seats for large study groups. The total seating in the library has been increased to ninety-three, with another sixteen seats in the computer lab. The area for bookstacks has been increased and journal stacks have been doubled in area. Each study and seminar room has a TV/VCR set-up and a slide projector. The technologically advanced design of the library allows students to plug their computers into any table or study carrel and access the Internet.

The computer lab has sixteen Pentium-chip computers that are networked to two laser printers. The T1 connection and Ethernet wiring allow students access to the school intranet, which links the entire campus and library together.

The colors and woods for the interior have been chosen to compliment the natural beauty of the surrounding campus, which can be seen from all areas of the library. The wood throughout the library is a lightly stained maple with black accents. Shelving and all other accents are black. Hermann Miller chairs are upholstered in shades of plum, with accents of beige and black.

With goals to increase access to new CDs on the college intranet and the incorporation of the network at each table and study carrel, the computer laboratory, and the seminar rooms, the M. B. Ketchum Library continues to be a leader in providing optometric information.

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER, PRESTON SMITH LIBRARY OF THE HEALTH SCIENCES, LUBBOCK, TEXAS

Submitted by Richard C. Wood

In 1993, planning began for a much-needed new building to replace the existing Texas Tech University Health Sciences Center (TTUHSC) Library of the Health Sciences facility. The Lubbock campus was home to the flagship biomedical library of the four-campus, four-library array of the health sciences center, with the other three libraries of the multi-campus system located in Amarillo, Odessa, and El Paso. The TTUHSC Libraries of the Health Sciences collectively formed one of the Resource Libraries of the National Network of Libraries of Medicine/South Central Region. The old library at Lubbock was comprised of some 19,611 square feet. It provided approximately 200 seats for users, two small computer laboratories having a total of twenty-five computers, one photocopy room with six public catalog stations, and no small group study facilities. As a result of a floor load problem in the late 1980s, approximately 60,000 volumes in the library's collections had to be removed and put in remote storage some ten miles distant from the library. This action necessitated the use of a vehicle and additional student employees to retrieve, deliver, and return materials to remote storage five times a week.

TTUHSC supports the Schools of Medicine, Nursing, and Allied Health, as well as the Graduate School of Biomedical Sciences at its Lubbock campus. The School of Pharmacy is situated at the Amarillo campus, which also supports two programs in the School of Allied Health as well as School of Medicine third- and fourth-year students and some 78 residents. The El Paso campus supports School of Medicine third- and fourth-year students, as well as approximately 176 residents. The Odessa campus supports School of Allied Health and School of Nursing programs, as well as 52 residents in the School of Medicine. The Lubbock campus library supports 1,054 students in its programs, 175 residents, 300 faculty members, and some 1,300 noninstructional staff. In all, the four campus libraries provide information support to more than 5,000 employees, 1,548 students, and 481 residents, as well as to a large number of unaffiliated health care personnel scattered throughout West Texas.

After a lengthy bid process, a contract was awarded to the architectural firms of Einhorn, Yaffee, and Prescott of Albany, New York, and Parkhill, Smith, and Cooper, Inc., of Lubbock, Texas. The general contractor for the project was Lee Lewis of Lubbock. The architects proceeded to develop plans for a freestanding library and teleconferencing center. The proposed structure would consist of three floors, with the library occupying some 50,000 square feet of the total space. The proposed building would be built for the stress of a possible later fourth floor addition, should one prove necessary. The TTUHSC division for production and broadcast of biomedical programs, HealthNet, would occupy some 20,000 square feet on the first floor. The building was substantially completed by summer 1998 (Figure 8).

In July 1998, the Library of the Health Sciences at Lubbock closed for one week in order to move to the new facility. Fortunately, the other three libraries of the TTUHSC system were able to meet the information

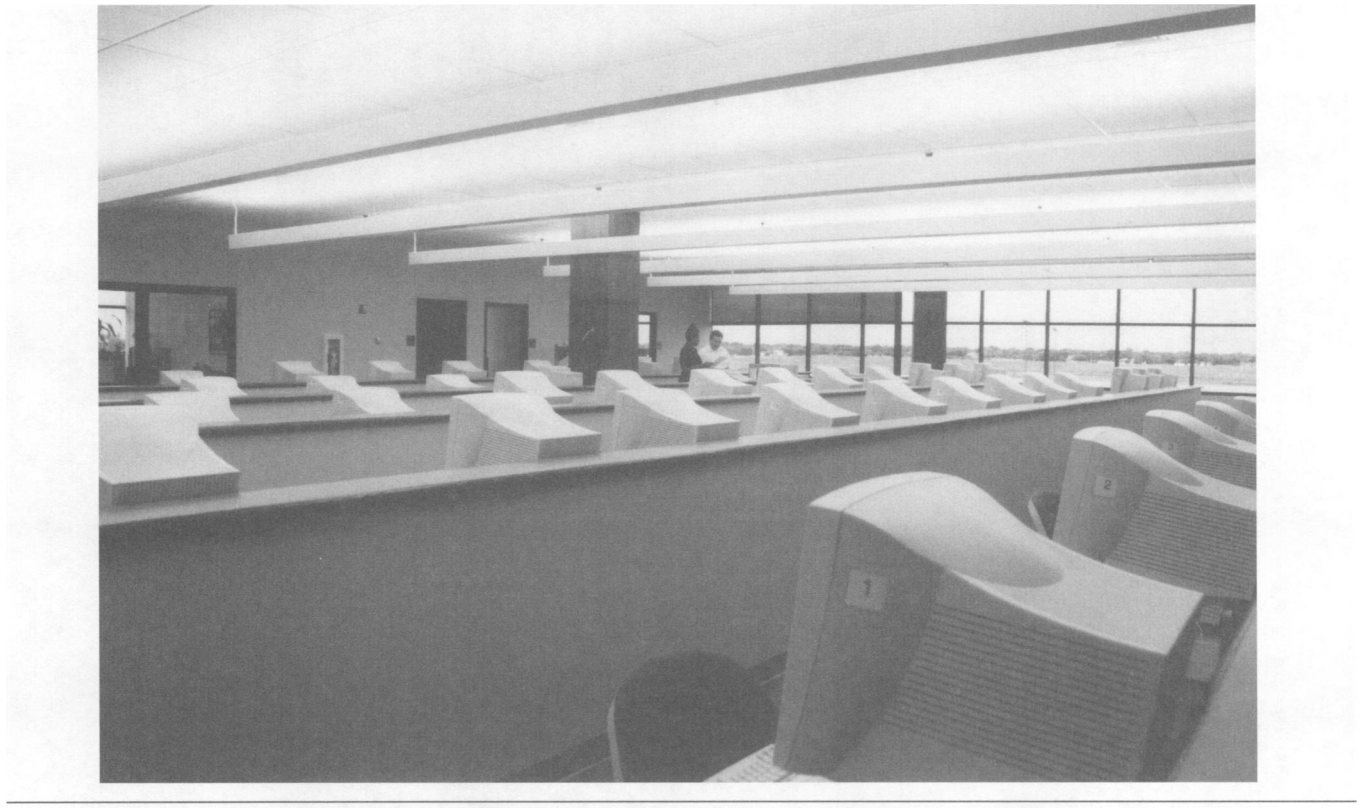
Figure 8
Texas Tech University Health Sciences Center, Preston Smith Library of the Health Sciences—exterior

Margaret Vugrin.

needs of the Lubbock users during the relocation of the library to its new facility. The collections of some 80,000 volumes, old stacks and end panels, furniture, and equipment were moved by professional movers; library staff was responsible for moving approximately 60,000 volumes from remote storage to stacks in the new library. The move was further complicated by the need to incorporate the old stacks and end panels with the new stacks. Old end panels were removed and refinished to match the new stack end panels. As the stacks were emptied of their contents in the old facility, those contents were moved into the new facility and placed on new shelving. The old stacks were then dismantled, delivered to the new library, reassembled, and integrated in with the new stacks. The refinished end panels were then reattached. Finally, the books and journals were redistributed throughout the new unified stack arrangement.

The new library was dedicated and formally named the Preston Smith Library of the Health Sciences in

Figure 9
Texas Tech University Health Sciences Center, Preston Smith Library of the Health Sciences—LRC view



Margaret Vugrin.

ceremonies held on August 13, 1998. Preston Smith, former governor of Texas and an alumnus of Texas Tech University, was present for the ceremonies.

The new facility contains twenty-eight group study rooms, a sixty-four-station Internet-connected computer lab in the Learning Resource Center (LRC), a rare books room with adjacent conference room, three photocopy rooms, a microfilm room, and a Student Mentoring Program Room. The library has public seating for over 300 users, as well as eighteen tables and twenty-eight open carrels. Use of the group study rooms and open carrels is open to TTUHSC faculty and students on a first-come, first-served basis. Each of the group study rooms, open carrels, rare books room, and conference room, as well as the leisure seating areas, are outfitted with dynamic Internet 10Base-T connectors to permit walk-in laptop utilization. Both the conference room and LRC have automatic rolled projection screens. Public restrooms are provided on all floors of the facility, as well as six wall-mounted public paging phones. The twenty-eight group study rooms have over 120 square feet each, with eight located in the LRC area, eight in the reference area, and twelve on the third floor, adjacent to the book and journals stacks.

Furnishings and decorations for the rare books room were provided through a $10,000 donation from the Lubbock-Crosby-Garza County Medical Association. As the moving project neared completion, the Preston Smith Library of the Health Sciences received a generous gift in the form of a valuable collection of Southwestern art. The Martha and Clifford L. Montgomery Collection consists of woodcuts, watercolors, and oil paintings by such artists as Peter Hurd, John Liggett Meigs, and Gustave Baumann. The collection was given to the library with the understanding that all works would be hung so that they might be enjoyed by the public. Accordingly, the collection has been on display in the reference area in the library. The naming of the library included the creation of a library acquisitions endowment fund in honor of Governor Smith and his late wife.

Acquisitions, receiving, and bindery preparation are housed on the first floor of the facility in an area of approximately 968 square feet. A key-operated freight service elevator is provided to permit the movement

Figure 10
University of Pittsburgh, Falk Library of the Health Sciences

Ed Massery.

of staff and materials to all three floors of the facility. The Cataloging Department (approximately 1,030 square feet) is located on the east side of the second floor. It is a large, well-lit open area with two walls of windows looking east. It includes offices (110 square feet each) for the catalog librarian and assistant director/technical services, as well as staff workstations in the open area.

Three reference librarians have offices (110 square feet each) on the second floor, facing inward onto the open reference area. They also have a common reference office of about 110 square feet. The reference collection—including indices, current journals display, and online public catalog search stations—is comprised of some 3,000 square feet in the center of the second floor. Shelving in this entire area is forty-four inches in height with continuous laminate top.

The rare books room (400 square feet) is located at the west end of this space. Shelving for this room is built-in wood cabinetry with wood-framed glass doors. The conference room, which is accessible only through the rare books room, features telephone and Internet connection, and is available by appointment for use by TTUHSC and community personnel.

The Learning Resource Center contains about 5,390 square feet (Figure 9). Approximately 2,790 square feet

Figure 11
University of South Dakota/Sioux Valley Hospital, The Karl and Mary Jo Wegner Health Science Information Center—exterior view

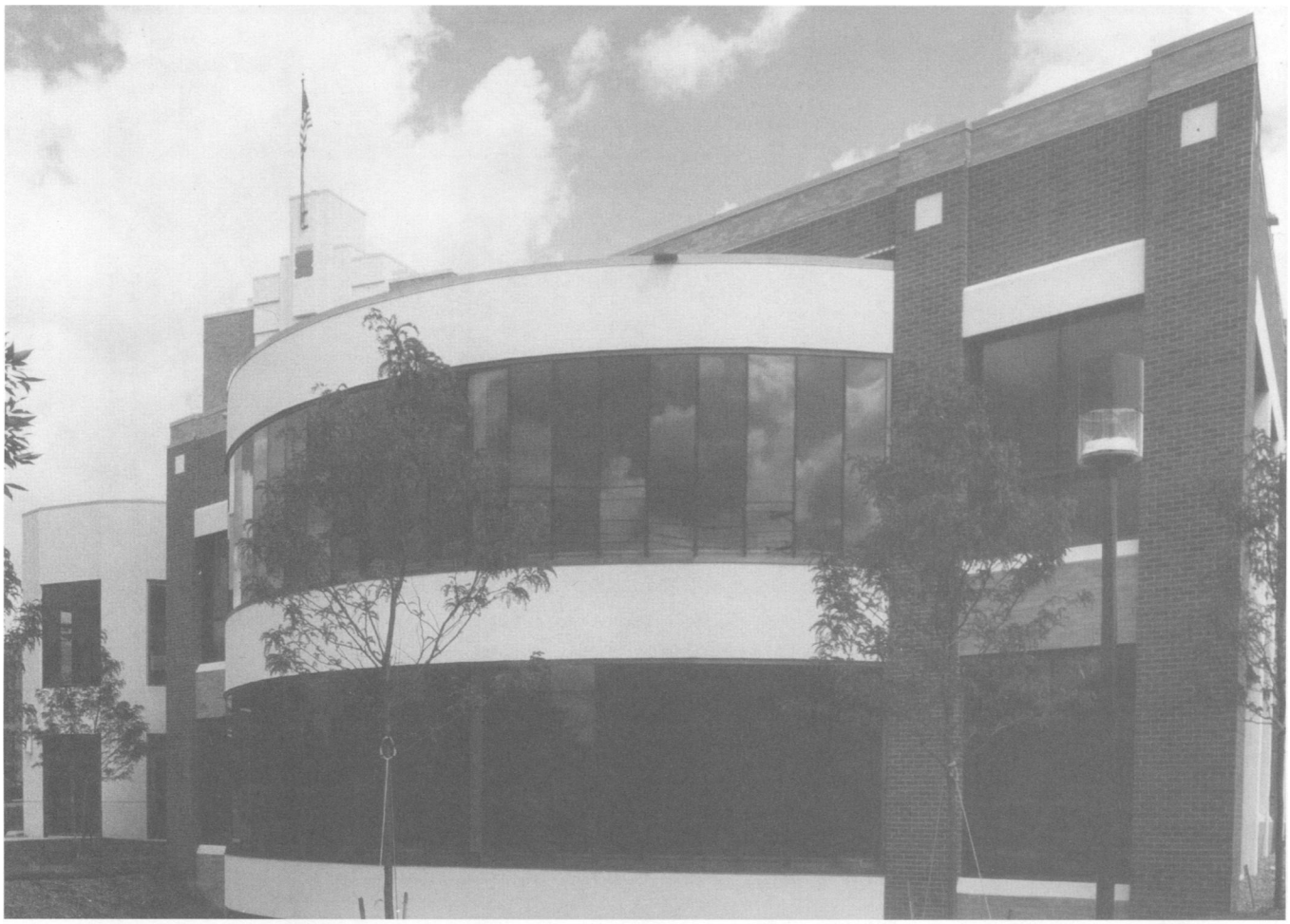


Photo courtesy of University of South Dakota and used with permission.

of that area is allocated for the sixty-four-station lab mentioned earlier; the remaining 2,600 square feet includes a closed stack area for archives and media storage. The assistant director/public services is officed in the LRC (140 square feet), as is the LRC workroom (approximately 378 square feet). The latter provides workspace for three LRC clerical workers.

The interlibrary loan office is located on the second floor and occupies approximately 250 square feet. The circulation area is comprised of a round counter, a reserve and reshelving area, and a circulation office having a collective area of about 600 square feet.

The library administration area on the north side of the second floor consists of offices for three senior associate directors, the business manager, the manager of computer services, and the director of libraries. A computer workroom, storage room, file room, reception area, and secretarial workstations are also located in this space, as is a library staff conference room. The square footage for this space is approximately 2,900 square feet. All librarian and staff workstations throughout the library have Internet-connected machines.

The book and journals stack area on the third floor takes up most of the space on that floor. In addition to the study carrels and twelve group study rooms, three leisure seating areas of approximately 882 square feet each are situated on the third floor. All leisure-seating areas have 10Base-T Internet connections. Access to the library is provided by means of a glass-enclosed stairwell on the northeast side of the facility, as well as by a public elevator from the lower lobby to the second floor. Another public elevator (inside the library's security system) moves between the second

Figure 12
University of South Dakota/Sioux Valley Hospital, The Karl and Mary Jo Wegner Health Science Information Center—interior view

Photo courtesy of University of South Dakota and used with permission.

and third floors. The Preston Smith Library of the Health Sciences is open 99.5 hours per week.

UNIVERSITY OF MARYLAND, HEALTH SCIENCES AND HUMAN SERVICES LIBRARY, BALTIMORE, MARYLAND†

Submitted by M. J. Tooey

Like its prototype in ancient Alexandria, the University of Maryland's Health Sciences and Human Services Library is a place to store the physical containers of knowledge while it provides the space for contemplation and scholarly discourse. Today, that means a high-tech building with networked access to resources worldwide, as well as the controlled atmosphere of the fifth floor rare books rooms for volumes from as far back as the fifteenth century.

While it would be tempting to let the Indiana limestone, brick, granite, and aluminum tell the library's story, doing so would only scratch the surface. The $32-million facility was built entirely with state funding and took eight years to plan and construct. Its opening on April 3, 1998, came nearly 200 years after the nation's first university medical center library was built on the campus.

As the second-largest medical library building on the East Coast, the library must serve several functions. It is the physical symbol of the university's dedication to the search for knowledge, a focal point for the campus community, a haven for study and collaboration, an access point and distribution center for printed and electronic information, a teaching library, and a workplace for library and computing staff who support it behind the scenes.

Its location opposite the University of Maryland Medical Center's expansive new entrance and the university's historic landmark, Davidge Hall, anchors the campus' twenty-five-acre urban setting; and it solidifies a significant presence in a neighborhood that includes the Baltimore Convention Center, the Baltimore Oriole Park at Camden Yards, and the new stadium of the Baltimore Ravens National Football League team.

† Because this library was featured in the April issue of the *Bulletin of the Medical Library Association*, there will only be a brief description of it in this article [15].

UNIVERSITY OF PITTSBURGH, FALK LIBRARY OF THE HEALTH SCIENCES, PITTSBURGH, PENNSYLVANIA

Submitted by Barbara A. Epstein

Falk Library of the Health Sciences added 6,000 square feet of space to the main floor of the library by renovating space formerly occupied by a food service facility. The expanded space included a new entrance to the library, relocated circulation desk, study-reading areas, and meeting rooms.

At the new entrance, library users are greeted by warm cherry woodwork, a motif that is carried throughout the renovated space and furnishings (Figure 10). The study-reading area includes tables, chairs, and individual carrels, and provides seating for ninety-two people. The expanded space also includes a classroom and two meeting rooms.

Displayed throughout the renovated area are paintings donated by the artist, Ralph M. Kniseley, M.D., who received his medical degree from the University of Pittsburgh School of Medicine in 1943, and went on to a distinguished career in nuclear medicine.

UNIVERSITY OF SOUTH DAKOTA/SIOUX VALLEY HOSPITAL, KARL AND MARY JO WEGNER HEALTH SCIENCE INFORMATION CENTER, SIOUX FALLS, SOUTH DAKOTA

Submitted by David A. Hulkonen

The Karl and Mary Jo Wegner Health Science Information Center (Wegner Center) opened to the public on January 5, 1998 (Figure 11). It is located on the University of South Dakota (USD) School of Medicine and Sioux Valley Hospital Campus in Sioux Falls, South Dakota. Funds for the Wegner Center have been raised entirely from private donations. The facility has space for 100,000 volumes, 1,000 journal subscriptions, and 70 multimedia computer workstations. The generosity of Dr. Wegner, the first dean of the four-year University of South Dakota School of Medicine, and Mrs. Wegner has been key to the success of the development campaign. Both have made significant contributions to medicine, the university, and community projects in South Dakota.

The USD School of Medicine is one of ten partners who have contributed staff, materials, and operating funds to begin meeting the vision of the Wegner Center. The Sioux Valley Health Systems, Veterans Affairs Medical Center, and South Dakota University Affiliated Program have contributed their professional collections and staff to expand the knowledgebase and onsite service expertise. The Wegner Center operates under nonprofit status accountable to a board of directors while its administration is provided by the University of South Dakota Health Science Libraries.

The Wegner Center has the stated mission to serve the people of South Dakota and surrounding region by providing quality health sciences information for health care practice, education, and research. Clinical requests take priority but a close affiliation with the Lommen Health Sciences Library, which serves the School of Medicine at the University of South Dakota in Vermillion, extends the ability of both libraries to support the needs of students and researchers. Among the goals of the Wegner Center are outreach to rural clinics and support of consumer health needs. Strengths of the current collection include clinical medicine, patient or consumer health information, maternal and child health information, and disease information across the life span.

User reactions to the new center, which makes use of the glass and light and soft seating as a contrast to the "high tech" image, has been very positive (Figure 12). An early decision to allow individual refreshments throughout the library has had no negative impact on either machine function or general building cleanliness. The public workstations provide full access to the Internet and library databases. An eighteen-station computer classroom is heavily scheduled and both this area and an adjoining computer lab are available for standard computing applications. Study rooms and informal booth seating as well as study carrels are wired for individual laptop network connections. The building has been wired to accommodate fiber to desktops and developing high-speed connectivity.

POSTSCRIPT

Since acceptance of this article, the Association of Research Libraries (ARL) has published two SPEC Kits that examine library building projects. Merrill-Oldham and Reed-Scott reported on a survey of fifty-eight libraries' storage facilities [16]. The differences between renovation and reconfiguration of library buildings is discussed in SPEC Kit 244 [17].

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